AMENDMENTS TO THE CLAIMS

1. (Currently Amended) - Dual-band dual-polarized antenna array operating at a lower frequency f1 and at a higher frequency f2, the ratio f2/f1 ~~bein~~ being smaller than 1.5, ~~characterized by the physical arrangement of the antenna elements, said arrangement comprising~~ wherein the antenna elements are arranged as follows:

(a) a first row of antenna elements aligned along a first vertical axis, said first row of antenna elements being dual-polarized antenna elements operating at said higher frequency f2, the spacing between said elements being smaller than the size of the central wavelength at said higher frequency f2

(b) a second row of antenna elements aligned along a second vertical axis, said second row of antenna elements being dual-polarized antenna elements operating at said lower frequency f1, said second row of antenna elements being spaced the same distance as ~~the~~ said first row of antenna elements in the adjacent row operating at frequency f2, said second vertical axis ~~being placed~~ located substantially parallel to said first vertical axis at a distance between 0.1 and 1.2 times the longer operating wavelength,

and wherein the positions of ~~the~~ said first row of antenna elements operating at frequency f2 are interleaved in the vertical direction with respect to the vertical positions of ~~the~~ said second row of antenna elements operating at frequency f1 ~~in such a way~~ so that the distance among elements is maximized ~~to minimize the inter-band and intra-band electromagnetic coupling among radiating elements~~.

2. (Currently Amended) - Dual-band dual-polarized antenna array according to claim 1 wherein at least one element operating at ~~any~~ either of the two frequencies f1 and f2 is

shifted horizontally from its corresponding vertical axis at a distance smaller than a 70% of the longer operating wavelength.

3. (Currently Amended) - Dual-band dual-polarized antenna array according to claim 1 or 2 wherein at least one of said two axes is tilted at an angle smaller than 45° with respect to the vertical direction.

4. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2 or 3~~ 1 or 2 wherein the size of the resonant antenna elements is smaller than ~~a~~ one half of the free-space operating wavelength ~~to minimize the electromagnetic coupling between them~~.

5. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2,3 or 4~~ 1 or 2 wherein the antenna elements are ~~within the class of~~ space-filling antennas.

6. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2,3,4 or 5~~ 1 or 2 wherein the antenna elements comprise at least a micro-strip patch element with ~~an~~ a space-filling perimeter.

7. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2,3,4,5 or 6~~ 1 or 2 wherein the operating frequencies f1 and f2 are ~~chosen two fall within~~ selected from the group consisting of the GSM1800 (1710-1880 MHz) and UMTS ~~frequency bands~~ (1900-2170 MHz) frequency bands, wherein the spacing between elements at each of said vertical ~~axis~~ axes is chosen between 100 mm and 165 mm, wherein the spacing between said two vertical ~~axis~~ axes is at least 40 mm and wherein the antenna elements are mounted upon a substantially rectangular conducting ground-plane, said ground-plane being at least 140 mm wide in the horizontal direction.

8. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2,3,4,5 or 6~~ 1 or 2 wherein the operating frequencies f1 and f2 ~~are chosen to be any combination within the set of the~~ are selected from the group of bands consisting of: GSM1800 or DCS (1710-1880MHz); UMTS (1900-2170 MHz), PCS1900 (1850-1990 MHz) and DECT (1880-1900) or any combination thereof.

9. (Currently Amended) - Dual-band dual-polarized antenna ~~for operation within the GSM1800 and UMTS bands~~ according to claim 7, wherein the antenna features a different electrical down-tilt at each of the two bands and wherein the antenna is used in a base-station of a cellular system network to provide coverage in said two bands.

10. (Currently Amended) - Dual-band dual-polarized antenna array according to claim ~~1,2,3,4,5 or 6~~ 1 or 2 wherein the operating frequencies f1 and f2 ~~are chosen to be any combination within the set of the~~ are selected from the group of bands consisting of: GSM900 (890-960 MHz); US Cellular/Qualcomm-CDMA (824-894 MHz); TACS/ ETACS (870-960); ID54 (824-894MHz); CT2 (864-868 MHz) and any combination thereof.

11. (Currently Amended) - Dual-band dual-polarized antenna array according to ~~any of the preceding claims~~ claim 1 or 2 wherein the spacing between elements at said first frequency f1 can differ from the spacing between elements at second frequency f2 up to ~~a~~ 20%.